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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/522,296	03/09/2000	Harunobu Kusumoto	8203-341	3309

7590 11/01/2004

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EXAMINER	
PASSANITI, SEBASTIANO	
ART UNIT	**PAPER NUMBER**
3711	

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/522,296	KUSUMOTO ET AL.	
	Examiner	Art Unit	
	Sebastiano Passaniti	3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *see detailed Office action*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) *22-27* is/are withdrawn from consideration.

5)☒ Claim(s) *17* is/are allowed.

6)☒ Claim(s) *1-16, 18-21 and 28-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office action is responsive to communication received 08/09/2004 – Amendment.

Claims 1-29 remain pending.

Claims 22-27 STAND withdrawn from further consideration.

The following grounds of rejection apply to claims 1-16, 18-21 and 28-30.

It is noted that the Amendment received 08/09/2004 is deficient because the Amendment does not fully address the rejection of claim 1 based upon applicant's admission of prior art (Fig. 28 from Japanese Patent Publication No. 10-295857), the rejection of claim 1 based upon Take and the rejection of claim 28 based upon Drake. See page 11 of the 08/09/2004 response. Considering the remainder of the arguments included with the 08/09/2004 replay and considering that the applicant has appeared to submit a *bona fide* reply, this deficiency has been waived and an action on the merits follows below.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and claim 30 are rejected under 35 U.S.C. §103(a) as being unpatentable over applicant's admission of prior art (Figure 28) and the description thereof bridging pages 4 and 5 of applicant's specification as being from Japanese Patent Publication No. 10-295857 (hereinafter referred to as "applicant's prior art"). Although there is no mention of "casting" per se, the patent does detail an integral molding process. The skilled artisan would have found it obvious to form such a hollow shell structure by casting, since casting is well known as a common manufacturing technique in the production of hollow metal club heads.

Claims 1 and 30 are rejected and claim 30 is rejected under 35 USC §103(a) as being unpatentable over Take. Reference is made to Figure 5 and the description thereof in column 1 of that patent as being disclosed in Japanese Patent Unexamined Publication No. 5-96013. Although there is no mention of "casting" per se, the patent does detail an integral molding process. The skilled artisan would have found it obvious to form such a hollow shell structure by casting, since casting is well known as a common manufacturing technique in the production of hollow metal club heads.

Claims 2, 4 and 5 are rejected under 35 U.S.C. §103(a) as being unpatentable over *either* applicant's admission of prior art (Figure 28) and the description thereof bridging pages 4 and 5 of applicant's specification as being from Japanese Patent Publication No. 10-295857 (hereinafter referred to as "applicant's prior art") *or* Take, each in view of Motomiya. Applicant's prior art and Take, as modified, both differ from the claimed invention in that applicant's prior art and Take fail to disclose or suggest a separate face portion as well as a forged or press worked face. Motomiya

acknowledges that club heads formed by the lost wax process, e.g., cast club heads, often suffer from pinholes and cracks (col. 1, lines 16-21), noting that forged pieces substantially eliminate said pinholes and cracks (col. 1, lines 36-40). Further, Motomiya shows the commonness of fashioning the head from plural forged elements, with the face making up a distinct part and mated to the remainder of the shell to form a hollow structure (col. 3, lines 3-6 and Figure 3). The incorporation of press forging to generate separate club head parts is deemed to be advantageous by Motomiya from a manufacturing point of view (col. 4, lines 19-25). In view of the patent to Motomiya, it would have been obvious to modify the device in the cited art reference to Take and applicant's prior art by substituting a forging process for the casting procedure made obvious by Take and applicant's prior art, the motivation being to produce a high quality club head that is substantially free of defects such as cracks and pinholes. Further and in view of the teachings in Motomiya, it would have been obvious to provide a separate face united to a club head body as opposed to fashioning a unitary cast body, the motivation being to make it desirable to mass produce the club heads, i.e., make the club heads use a less expensive process.

Claims 13, 20 and 21 are rejected under 35 U.S.C. §103 as being unpatentable over *either* applicant's admission of prior art (Figure 28) and the description thereof bridging pages 4 and 5 of applicant's specification as being from Japanese Patent Publication No. 10-295857 (hereinafter referred to as "applicant's prior art") *or* Take, each in view of Minabe. Both applicant's prior art and Take, as modified, differ from the claimed invention in that applicant's prior art and Take do not disclose the claimed wall

thickness that is required by claim 13 nor the particular materials defined in claims 20 and 21. Minabe teaches a wall thickness of 1.2 mm (col. 3, lines 29-31) to reduce the weight of the head. Minabe further outlines that a pipe-guiding groove (34), which is deemed to serve as a support portion, attaches the shaft-securing portion (24c) to the heel portion. Still further, Minabe makes reference to β-type materials for both the face and the head, although notes that other titanium alloys may be used (col. 3, lines 25-38). These materials provide the required rigidity for the club head. In view of the patent to Minabe, it would have been obvious to modify the device in applicant's prior art and Take to include these claimed features, the motivation being to make the club head both lighter in weight and rigid and to more securely retain the shaft securing shaft portion.

Claim 16 is rejected under 35 U.S.C. §103(a) as being unpatentable over *either* applicant's admission of prior art (Figure 28) and the description thereof bridging pages 4 and 5 of applicant's specification as being from Japanese Patent Publication No. 10-295857 (hereinafter referred to as applicant's prior art) *or* Take, each in view of Endo. To have fashioned the device in Take or applicant's prior art to include a first upper end of the inside of the toe portion to be higher (in height) than the upper end of the inside portion of the heel portion in order to accord the Take club head or applicant's prior art club head with a more traditional shape would have been obvious in view of the patent to Endo (Figure 6) which shows it to be old in the art of hollow metal club heads to provide this feature.

Claim 19 is rejected under 35 U.S.C. §103 as being unpatentable over *either* applicant's admission of prior art (Figure 28) and the description thereof bridging pages

4 and 5 of applicant's specification as being from Japanese Patent Publication No. 10-295857 (hereinafter referred to as applicant's prior art) *or* Take, each in view of Mills. To have further modified the device in Take or applicant's prior art such that the shaft securing portion does not protrude above the top portion to provide an even, finished appearance would have been obvious in view of the patent to Mills which shows it to be old in the art to provide a shaft securing element (Figures 4, 5) that remains confined within the head. Note that Mills details that the club head construction he details is not limited to clubs formed exclusively formed of wood material.

Claims 6, 7, 8, 9, 10, 11, 12, 14, 15, 18 and 29 are rejected under 35 USC §103(a) as being unpatentable over *either* applicant's admission of prior art (Figure 28) and the description thereof bridging pages 4 and 5 of applicant's specification as being from Japanese Patent Publication No. 10-295857 (hereinafter referred to as applicant's prior art) *or* Take, each in view of Mockridge. To have modified the device in Take or applicant's prior art to include the features outlined in each of claims 6-12, 14, 15, 18 and 29 simply for the purpose of incorporating characteristics common to hollow club head designs would have been obvious in view of the patent to Mockridge. Note the following summary of these features as detailed by Mockridge, which obviates the inclusion of these items within the design of hollow heads.

As to claim 3, Figure 1 of Mockridge clearly shows a second hollow portion between the shaft securing portion and the face portion (13).

As to claim 6, the shaft-securing portion in Mockridge includes a hole from its upper end and throughout its length to its lower end.

As to claim 7, the shaft-securing portion in Mockridge may be cast separately and thus includes its own top and bottom portion. In other words, the bottom portion would include that portion of the cylindrical wall perimeter that lies in a common plane. The shaft-securing portion can have a hole extend throughout its length and still have a bottom.

As to claim 8, the bottom of the shaft-securing portion in Mockridge engages the plane of the sole and thus is formed in the same surface of the sole portion.

As to claim 9, the bottom of the shaft-securing hole and the sole in Mockridge have substantially the same thickness.

As to claim 10, the shaft-securing portion in Mockridge may be integrally cast with the body (page 1, lines 20-22).

As to claim 11, the shaft-securing portion in Mockridge clearly includes a cylindrical shape from the top to the sole portion, with the interior of said cylindrical shape dimensioned to accept a cylindrical lower shaft portion (21).

As to claim 12, Figures 2 and 3 in Mockridge clearly show that the first hollow portion is formed such that a clearance of at least 1 mm is defined between the shaft-securing portion and the heel wall.

As to claim 14, since the shaft securing portion in Mockridge extends at an angle from the top to the sole, it is clear, as shown in Figure 2, that the width of the hollow portion between the shaft-securing portion and the heel wall is greater nearer a sole of the head than a top portion of the head.

As to claim 15, as the sole and the heel in Mockridge are distinct portions of the head, it is clear that en edge is formed between the sole and the heel wall.

As to claim 18, a portion of the shaft-securing portion (19) in Mockridge clearly extends above the head body to form a hosel (Figure 2).

As to claim 29, the top portion of the club head body in Mockridge is provided with an aperture (joining hole) to accommodate the shaft-receiving element (19).

Claim 28 is rejected under 35 USC §102(b) as being anticipated by Drajan. Reference is made to Figure 1 of Drajan. The sole portion (40) is "fixed" to the top portion and indeed covers substantially a whole bottom of the hollow outer shell.

Claim 17 appears to be allowable over the prior art references of record.

RESPONSE TO ARGUMENTS

Applicant's arguments with respect to claims 1-16, 18-21 and 28-30 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sebastiano Passaniti whose telephone number is 703-308-1006. The examiner can normally be reached on Mon-Fri (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on 703-308-1513. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Passaniti

Sebastiano Passaniti
Primary Examiner
Art Unit 3711

S.Passaniti/sp
October 28, 2004